DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/Ala Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-007195 Address: 333 Burma Road **Date Inspected:** 01-Jun-2009

City: Oakland, CA 94607

Project Name: SAS Superstructure **OSM Arrival Time:** 1845 **OSM Departure Time:** 645 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: CWI Present: Yes Jin Dong Liang, Wei Song Shi No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:**

34-0006 **Bridge No: Component:** Tower and OBG Components

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Trial Assembly Area

This QA Inspector, George Goulet, randomly observed the following in the trial assembly area:

The section 4AE/4BE deck plate U-rib connection bolt sets from lap plate #38 to #58 appeared to have been final tightened with only 2 bolts showing to be less than the minimum 180° nut rotation, but 4 bolts with no legible marks. The bolt sets were marked by this QA Inspector, George Goulet. No ZPMC workers were performing any other bolting work.

Bay 10

This QA Inspector, George Goulet, randomly observed the following work in progress in Bay 10:

SMAW tack welding of weld joint NSD1-FDSA4-3A/C-3A located on PCMK north tower, lift 4, skin D. ZPMC QC was identified as CWI Jin Dong Liang (QC1). Welder was identified as 206568. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Hao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-P-2211-B-U3b. Also at this location and appearing to be monitoring the welding was ABF representative Ma Zhen Yi.

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SMAW tack welding of weld joint NSD1-FDSA4-3A/C-9A located on PCMK north tower, lift 4, skin D. ZPMC QC was identified as QC1. Welder was identified as 049225. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Hao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-P-2211-B-U3b. Also at this location and appearing to be monitoring the welding was ABF representative Ma Zhen Yi.

SMAW tack welding of weld joint NSD1-FDSA4-1A/C-20A located on PCMK north tower, lift 4, skin D. ZPMC QC was identified as QC1. Welder was identified as 052889. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Hao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-P-2211-B-U3b. Also at this location and appearing to be monitoring the welding was ABF representative Ma Zhen Yi.

SAW welding of weld joints NSD1-A116E/J-73A located on PCMK north tower shaft, lift 1, skins A to E. ZPMC QC was identified as CWI Wei Song Yi (QC2). Welders were identified as 201750, 040460, 052917. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S. Also at this location and appearing to be monitoring the welding was ABF Representative Zhang Qin Jian.

SAW welding of weld joints WSD1-A423B/H-4B located on PCMK west tower shaft, lift 1, skins A to B. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also

at this location and appearing to be monitoring the welding was ABF Representative You Yuan Mao.

SAW welding of weld joints WSD1-A423B/H-5B located on PCMK west tower shaft, lift 1, skins B to C. ZPMC QC was identified as QC1. Welder was identified as 047304. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also at this location and appearing to be monitoring the welding was ABF Representative You Yuan Mao.

SAW welding of weld joints WSD1-A115C/J-90A located on PCMK west tower shaft, lift 1, skins B to C. ZPMC QC was identified as QC1. Welder was identified as 056975. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-C-A3c-S-2. Also at this location and appearing to be monitoring the welding was ABF Representative You Yuan Mao.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

As noted above, and this QA Inspector, George Goulet, asked QC if all the welding variables observed by QC appeared to comply with the appropriate WPS, including the preheat requirements according to thickness of the thickest member being welded. QC showed this QA Inspector, George Goulet, that QC was carrying the proper temperature sticks to monitor the minimum and maximum preheat and interpass temperatures and replied that all QC observed did appear to comply.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 134-8257-0045, who represents the Office of Structural Materials for

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your project.

Inspected By: Goulet,George Quality Assurance Inspector

Reviewed By: Carreon, Albert QA Reviewer